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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 551,716	04 18 2000	Mark A. Reed	02893-036001	2689

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EXAMINER

PHAN, TRONG Q

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/551,716

Applicant(s)

REED ET AL.

Examiner

TRONG PHAN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 4/9/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 9,10,14-16,20 and 22-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8,11-13,17-19,21 and 26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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The Notice of Abandonment mailed on 4/16/2003 has been withdrawn in view of Applicant's Amendment of 4/9/2003.

A new non-FINAL Office Action has been set forth as follows:

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The feature "a phenyl-ethynyl-substituted phenyl-ethynyl-phenyl linkage including at least one nitro group is not described in the specification.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8, 11-13, 17-19, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eguchi et al., 4,939,556, in view of Ogawa et al., 5,338,579, Deviney et al., 5,644,006, Jeong et al., 5,989,766, and Fukami et al., 5,914,208.

Eguchi et al., 4,939,556, discloses in Fig. 5 an electronic device comprising:

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two electrodes 10 of palladium (see lines 24-31, column 12) as recited in claims 1 and 21;

conductive layer 8 and insulating layer 9 being formed by a (single or one layer) monomolecular conductive organic metallic film or monomolecular built-up conductive organic metallic film (see lines 45-65, column 1 and lines 35-39, column 3 and lines 48-51, column 9) which includes electron withdrawn/electron acceptor (see lines 47-48, column 1) group such as: alkyl group (see line 49, column 1; lines 14 and 63, column 4; and line 38, column 8) which is well known in the art for including sp- or sp<sup>2</sup> - hybridized atoms as recited in claim 13, binding group such as carboxyl group (line 51, column 3) and tetracyano group as recited in claim 18 (see line 20, column 5); and electron donor phenyl group (see line 45, column 3) as recited in claims 11-12 and 16; negative resistance at room temperature (see lines 49-59, column 8) as recited in claim 26.

What is not shown in Eguchi et al., 4,939,556, is the alternating ethynyl and aryl groups as recited in claim 1.

Ogawa et al., 5,338,579, discloses the teaching of substituting the alkyl group for the ethynyl group/aryl group (see lines 53-54, column 2).

It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to modified Eguchi et al., 4,939,556, by the teaching of Ogawa et al., 5,338,579, for just a matter of design choice.

What is not shown in Eguchi et al., 4,939,556, which is modified by Ogawa et al., 5,338,579, is the phenyl-ethynyl linkage group as recited in claims 1 and 21.

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Deviney et al., 5,644,006, discloses the teaching of substituting the ethynyl group for the phenyl-ethynyl group (see lines 58-63, column 2) including nitro group N (see lines 1-15, column 3).

It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to modified Eguchi et al., 4,939,556, which is modified by Ogawa et al., 5,338,579, by the teaching of Deviney et al., 5,644,006, for just a matter of design choice.

What is not shown in Eguchi et al., 4,939,556, which is modified by Ogawa et al., 5,338,579, and Deviney et al., 5,644,006, is the nitro electron withdrawing group as recited in claims 1 and 21.

Jeong et al., 5,989,766, discloses the teaching of using alkyl group or nitro group for an electron acceptor (withdrawer) (see lines 64-67, column 3 and lines 1-16, column 4).

It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to modified Eguchi et al., 4,939,556, which is modified by Ogawa et al., 5,338,579, and Deviney et al., 5,644,006, by the teaching of Jeong et al., 5,989,766, for just a matter of design choice.

What is not shown in Eguchi et al., 4,939,556, which is modified by Ogawa et al., 5,338,579, Deviney et al., 5,644,006, and Jeong et al., 5,989,766, is the biphenyl group as recited in claim 19.

Fukami et al., 5,914,208, discloses the teaching of substituting the ethynyl group for the biphenyl group (see lines 60-61, column 5).

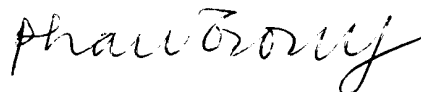
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It would have been obvious under 35 USC 103(a) to one of ordinary skill in the art at the time of the invention was made to modified Eguchi et al., 4,939,556, which is modified by Ogawa et al., 5,338,579, Deviney et al., 5,644,006, and Jeong et al., 5,989,766, by the teaching of Fukami et al., 5,914,208, for just a matter of design choice.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRONG PHAN whose telephone number is (703) 308-4870. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (703) 308-4910. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4021 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



**TRONG PHAN  
PRIMARY EXAMINER**

May 26, 2003